DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-002034 Address: 333 Burma Road **Date Inspected:** 24-Jan-2008

City: Oakland, CA 94607

OSM Arrival Time: 1800 **Project Name:** SAS Superstructure **OSM Departure Time:** 700 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island Contractor: **Location:** Shanghai, China

CWI Name: Fu Guo Gang **CWI Present:** Yes No N/A **Inspected CWI report:** Yes **Rod Oven in Use:** Yes No No N/A Yes N/A **Weld Procedures Followed: Electrode to specification:** No Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS: Delayed / Cancelled:** Yes No N/A

34-0006 **Bridge No: Component:** Tower Mock-Ups

Summary of Items Observed:

The Caltrans Quality Assurance Inspector (QA), M. Paul Stovall, was present at Zhenhua Port Machinery Company, (Z. P. M. C.), on Changxing Island, Shanghai, China for the purpose of monitoring the fabrication of the SAS/San Francisco/Oakland Bay Bridge.

77-meter Mock-Up, Z. P. M. C. QC, notified the QA Inspector at 18:49 (while still in transit, no cell phone coverage), and again at 19:12 (this was within 5 minutes of the QA Inspector arriving). The QA Inspector left, went into the shop, in time to see Z. P. M. C. QC personnel, Magnetic Particle (MT) testing the area on the 114-meter Mock-Up, where the lifting lugs had been cut off and had had the area ground, it was found to be in compliance with the contract documents. After this was finished, the QA Inspector asked the QC Inspector if the MT crew could redo one of the welds on the 77-meter Mock-Up (the QA Inspector thought that something was there on a cursory inspection). The QC Inspector agreed, the MT crew started, and there was an indication approximately 19 mm long in the weld. QA asked QC how this was missed, no answer was given. QA inspector left his office so fast he did not have camera, MT yoke, or any other equipment. QA Inspector left to go retrieve it and shortly ran into another QA Inspector who had a camera, by the time they had returned to the shop, the QC MT crew was finishing grinding the indication out and had started to MT'ing it again, and the indication was no longer present. The QA Inspector after finishing witnessing the MT test, went to the Z. P. M. C. QC office, asked to speak to QC inspector Fu Yuhong privately, and explained what had happened to him, he replied that he would pass this along to his boss.

Z. P. M. C. Welder, Wang Bing—048696, welded weld number MUA-MA1-F/F-8, using WPS-B-T-2332-Tc-P5-F. The QA Inspector recorded 334 amps and 31.3 volts.

WELDING INSPECTION REPORT

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Summary of Conversations:

The QA Inspector spoke with QC Inspector Arbin Huang and Fu Yuhong, in regards to the missed MT indication on the 77-meter Mock-Up, its location and size. The QA Inspector told the QC inspectors that at a minimum, for an indication of this size to be missed, the MT crew was not paying attention.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Stovall, Paul	Quality Assurance Inspector
Reviewed By:	Cochran,Jim	QA Reviewer